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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,328	09/29/2000	James A. Belmont	99104CON	1547

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EXAMINER

OH, TAYLOR V

ART UNIT

PAPER NUMBER

1625

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/672,328

Applicant(s)

BELMONT, JAMES A.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments with respect to claims 1-27 and 29-31 have been considered but are moot in view of the new ground(s) of rejection.

The Status of Claims

Claims 1-27 and 29-31 are pending.

Claims 1-27 and 29-31 are rejected.

The objection to the Specification

The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

The attempt to incorporate essential subject matter (see page 21 , lines 18-22) into this application by foreign references such as EP 0803771 A1; FEP0770494 A2; EP0770495 A1; WO 98/31550; WO 99/37481; WO 99/37482 to is improper because Claim 31 describes the method comprising subjecting the plate to a solvent capable of removing portions of the imaged layers defining the pattern. This is the essential step in the claimed invention. Therefore, appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

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1. Claims 1-27 and 29-31 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a carbon black product having a $\text{H}_2\text{NC}_6\text{H}_4\text{CO}_2(\text{CH}(\text{CH}_3)\text{CH}_2\text{O})_x\text{C}_6\text{H}_5$ polymer and $\text{C}_6\text{H}_4\text{SO}_3^-$ group, does not reasonably provide enablement for various pigments having attached to a) at least any steric group and b) at least any organic ionic group and at least any amphiphilic counter ion. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to include unrelated to the invention commensurate in scope with these claims. Attention is directed to *In re Wands*, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation., citing *Ex Parte Forman*, 230 USPQ 546 (Bd Apples 1986) at 547 the court recited eight factors:

- 1) the quantity of experimentation,
- 2) the amount of direction or guidance provided,
- 3) the presence or absence of working examples,
- 4) the nature of the invention,
- 5) the state of the prior art,
- 6) the relative skill of those in the art ,
- 7) the predictability of the art, and
- 8) the breath of the claims.

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Concerning the quantity of experimentation, Applicants' specification has shown only one prepared example for the final carbon black product having a $\text{H}_2\text{NC}_6\text{H}_4\text{CO}_2(\text{CH}(\text{CH}_3)\text{CH}_2\text{O})_n\text{C}_6\text{H}_5$ polymer and $\text{C}_6\text{H}_4\text{SO}_3^-$ group product, which can not be the representative for various pigments having attached to a) at least any steric group and b) at least any organic ionic group and at least any amphiphilic counter ion ; in addition, there is uncertainty about how to form various pigments having attached to a) at least any steric group and b) at least any organic ionic group and at least any amphiphilic counter ion due to a lack of examples to describe the formation of various pigment products. Accordingly, applicants' specification is devoid of any synthetic procedures or directional guidance that would place said various pigments having attached to a) at least any steric group and b) at least any organic ionic group and at least any amphiphilic counter ion in possession of the public in view of an ultimate patent grant. Undoubtedly, more than routine experimentation would be involved to synthesize the various pigments attached to any steric group and b) at least any organic ionic group and at least any amphiphilic counter ion.

Furthermore, regarding the breadth of the claims, it does read on the use of any steric group and at least any organic ionic group and at least any amphiphilic counter ion in the process of making the final product ; however, the specification does show only that the organic ionic group can be selected from the group of $\text{C}_6\text{H}_4\text{CO}_2^-$, $\text{C}_6\text{H}_4\text{SO}_3^-$, $\text{C}_{10}\text{H}_6\text{CO}_2^-$, $\text{C}_{10}\text{H}_6\text{SO}_3^-$, $\text{C}_2\text{H}_4\text{SO}_3^-$, and etc , the steric group is described only in the following formulas; $-\text{X}-\text{Sp}[\text{Nion}]_p\text{R}$, $-\text{X}-\text{Sp}-[(\text{CH}_2)_m\text{O}-]_p\text{R}$, $-\text{X}-\text{Sp}-[\text{A}]_p\text{R}$

, ~~-X-Sp-[polymer]R~~, and the amphiphilic counter ion can be selected from the group of cationic amphiphilic ions, anionic amphiphilic ions, and etc.

Therefore, the specification falls short because data essential for how all starting materials any steric group and at least any organic ionic group and any amphiphilic counter ion would be led to form the desired final product. Thus, appropriate correction is required.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 4 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, the phrase "a substituted or unsubstituted arylene group" is recited. The term "a substituted" is vague and indefinite. In the absence of the specific moieties intended to effectuate modification by the "substitution" or attachment to the chemical core claimed, the term "substituted" renders the claims in which it appears indefinite in all occurrences wherein applicants fails to articulate by chemical name, structural formula or sufficiently distinct functional language, the particular moieties applicants regards as those which will facilitate substitution, requisite to identifying the composition of matter claimed. Thus, appropriate correction is required.

In claims 4 and 11, the phrase " a functional group" is recited. The term " a functional group" is vague and indefinite because there are numerous functional groups present in the organic chemistry ,which would work for the claimed compounds and which would not work at all for them. Therefore, in order to clarify the functional groups to be used in the claimed products, a definite list of the functional groups is necessary. Thus, appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 21-22, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belmont et al (US 5,571,311).

Belmont et al teaches a pigment such as carbon black having attached at least one organic groups substituted with an ionic (see col. 5, lines 5-6) or an ionizable functional group having at least an amphiphilic, such as quaternary ammonium groups quaternary phosphonium groups (see col. 5, lines 59-60); furthermore, for the organic group attached to the carbon black, the organic group can be at least one aromatic group substituted with one branched C1-C12 alkyl group (see col. 5, lines 26-28). In addition, an ink may include a vehicle which functions as a carrier during printing and / or additives to improve printability and drying (see col. 11, lines 8-16).

Moreover, the reference does indicate that the formation of an aqueous emulsion inkjet ink contains a suitable vehicle, binders and additives (see col. 9 lines 45-59).

However, the instant invention differs from the prior art Belmont et al in that the claimed steric group is unspecified.

Concerning the lack in describing the steric group, Belmont et al does describe that the organic group can be at least one aromatic group substituted with one branched C1-C12 alkyl group (see col. 5, lines 26-28). From this, it follows that the bulky group such as the aromatic group can be used as either the organic group or the steric group depending on the choice of the skilled artisan in the art. Therefore, if the skilled artisan had desired to formulate the pigment product containing the steric group attached to the pigment, it would have been obvious to the skillful artisan in the art to be motivated to use the Belmont's et al substituted aromatic compound as the organic group having the steric group in the Belmont's et al modified carbon black.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*** *Taylor V. Oh*
4/15/06